

# **Sampling and Analysis Plan for Copper Flat Mine**

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**Prepared for:  
New Mexico Copper Corporation**

**Submitted to:  
Mining and Minerals Division  
New Mexico Energy, Minerals and Natural  
Resources Department**

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**with support from Parametrix and  
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- Attachment 1: Quality Assurance Project Plan  
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## Acronyms and Abbreviations

ABA	acid base accounting
Alta Gold	Alta Gold Company
amsl	above mean sea level
APE	area of potential effects
AWRM	Active Water Resource Management
bgs	below ground surface
BLM	U.S. Bureau of Land Management
cc	cubic centimeter
CFQM	Copper Flat Quartz Monzonite
CFR	Code of Federal Regulations
cfs	cubic feet per second
cm	centimeter
CRMD	New Mexico State University Cultural Resources Management Division
CTS	Class One Technical Services
°F	degrees Fahrenheit
DTW	depth to water
DVM	digital volt meter
EA	Environmental Assessment
EIS	Environmental Impact Statement
EMNRD	New Mexico Energy, Minerals and Natural Resources Department
EPA	U.S. Environmental Protection Agency
ESD	Ecological Site Description
ft	feet
GIS	Geographic Information System
Gold Express	Gold Express Corporation
gpm	gallons per minute
GPS	Global Positioning System
HCPI	New Mexico Historic Cultural Properties Inventory
HSR	Human Systems Research, Inc.
HSU	hydrostratigraphic unit
IM	isolated manifestation
INTERA	INTERA, Incorporated
JFD	joint frequency distribution
Km	kilometer
kV	Kilovolt
l/min	liters per minute
LA	Laboratory of Anthropology
LOG	lognormal
LRGB	Lower Rio Grande Underground Water Basin
m	meter
Ma	million years ago
mb	millibars
mg/L	milligrams per liter
ml	milliliter

mm	millimeter
MMD	New Mexico Mining and Minerals Division
MSF	Middle Santa Fe Group hydrostratigraphic unit
Mst	million standard tons
MVA	Megavolt-ampere
MWMP	Meteoric Water Mobility Procedure
NAD	North American Datum
NAG	Net Acid Generation
NELAP	National Environmental Laboratory Accreditation Program
NHPA	National Historic Preservation Act
NIST	National Institute of Standards and Technology
NMAAQs	New Mexico Ambient Air Quality Standards
NMAC	New Mexico Administrative Code
NMCC	New Mexico Copper Corporation
NMCRIS	New Mexico Cultural Resources Information System
NMED	New Mexico Environment Department
NMED GWQB	New Mexico Environment Department Groundwater Quality Bureau
NMED SWQB	New Mexico Environment Department Surface Water Quality Bureau
NMSRCP	New Mexico State Register of Cultural Properties
NORM	normal
NP	nonparametric
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OSE	New Mexico Office of the State Engineer
oz	ounce
PFEIS	Preliminary Final Environmental Impact Statement
PM <sub>[x]</sub>	particulate matter less than [x] micrometers
PSD	prevention of significant deterioration
QA/QC	quality assurance/quality control
QAPP	Quality Assurance Project Plan
Quintana	Quintana Minerals Corporation
R	range
RAM	random access memory
RH	relative humidity
Rio Gold	Rio Gold Mining Ltd
ROW	right-of-way
rpm	revolutions per minute
SAP	Sampling and Analysis Plan
SCS	Soil Conservation Service
SHPO	New Mexico State Historic Preservation Officer
Site	Copper Flat Mine Permit Area
SOP	standard operating procedure
SRK	Steffen Robertson and Kirsten, Inc.
st	standard ton
S-W	Shannon-Weiner Index
T	township

TD	total depth
TDS	total dissolved solids
Tenneco	Tenneco Minerals
TSP	total suspended particulates
TSS	total suspended solids
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
USBR	U.S. Bureau of Reclamation
USF	Upper Santa Fe Group hydrostratigraphic unit
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator
VOA	volatile organic analysis
WQCC	New Mexico Water Quality Control Commission